

REMARKS

Claims 36-39, 41, 43, and 45-47 are pending in the present application. Claims 1-35, 40, 42, 44, and 48-65 are withdrawn subject to a restriction requirement as well as an election of species requirement. Reconsideration of the application is respectfully requested in view of the following responsive remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

In the office action of March 10, 2005, the following actions were taken:

- (1) A restriction requirement and an election of species requirement under 35 U.S.C. 121 was formalized in writing.
- (2) Claims 36-39, 43, and 47 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,306,994 to Donald et al (hereinafter "Donald").
- (3) Claims 36-39, 41, 43, and 45-47 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,708,095 to Page et al. (hereinafter "Page").

It is respectfully submitted that the presently pending claims be examined and allowed.

Election/Restriction Requirement

The Examiner has required that a restriction of the claims be made pursuant to 35 U.S.C. 121. The Applicant confirms the election made on February 28, 2005 in which claims 36-39, 41, 43, and 45-47 currently remain under consideration. The elections correspond to the election of group IV, as well as the election of the species as summarized by the Examiner in the Office Action of March 10, 2005. With respect to the election of species, the Applicant agrees that claim 36 is generic with respect to all species identified by the Examiner, and requests allowance of withdrawn claims dependent from generic independent claim 36 upon allowance thereof.

Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 36-39, 41, 43, and 45-47 under 35 U.S.C. 102 over two individual references. Before discussing the rejections, it is thought proper to briefly state what is required to sustain such a rejection. It is well settled that "[a] claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference."

Verdegaal Bros. v. Union Oil of California, 814 F.2d 628, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987). In order to establish anticipation under 35 U.S.C. § 102, all elements of the claim must be found in a single reference. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986), *cert. denied* 107 S.Ct. 1606 (1987). In particular, as pointed out by the court in *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1981), *cert. denied*, 469 U.S. 851 (1984), "anticipation requires that each and every element of the claimed invention be disclosed in a prior art reference." "The identical invention must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.* 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Present Invention

Claim 36 of the present invention teaches a latex-containing ink-jet ink, including a liquid vehicle, a colorant that is dissolved or dispersed in the vehicle, and latex particulates that are dispersed in the liquid vehicle. The latex particulates are formed by a specific process which requires the preparation of a monomer emulsion which includes an aqueous phase and an organic monomer (dispersed or codispersed in the aqueous phase) including at least one blocked acid monomer. In other words, the polymerization (or copolymerization) of the blocked acid monomer occurs within the discontinuous phase of an aqueous emulsion. After polymerization of the organic monomer(s), which includes at least one blocked acid monomer, blocked acid latex particulates dispersed within the aqueous phase are formed. The blocked acid latex particulates are unblocked to form acidified latex particulates. Typically, the latex particulates remain in the aqueous phase, and the aqueous phase forms at least part of the liquid vehicle of the ink-jet ink.

Discussion

The Examiner rejected claims 36-39, 43, and 47 under 35 U.S.C. 102(b) as being anticipated by Donald. Donald teaches an ink including an aqueous carrier, a colorant, and a block copolymer dispersant. The block copolymer is prepared using standard block copolymerization techniques. The preparation of these block copolymers by emulsion polymerization is neither taught nor suggested, and thus, the

structures of the polymers are not latex particulates and would necessarily be different.

The preparation process for the block copolymers is described in Donald starting at column 6, line 20 and runs through column 7, line 13. Specifically, monomers of a particular block are added a portion at a time to a growing polymer chain. Specifically, the group transfer method is used, as reported in "Anionic Polymerization: Principles and Practice," or the ring opening method is used as reported in "Ring Opening Polymerization." Neither of these approaches are emulsion polymerization methods as described by the Applicant, where aqueous emulsions are prepared first and the discontinuous phase is polymerized. Instead, monomers are typically added alone or as mixtures. Mixtures of monomers are not emulsions. In fact, there is no mention of water whatsoever in the three examples where the block copolymers are formed. Water is only described when making the inks or ink concentrates. In contrast to Donald, the latex particulates used in the ink of the present invention are formed using an emulsion polymerization process, where an aqueous phase must be present.

Different polymerization processes inherently generate polymers with distinctive and unique characteristics. For example, emulsion polymerization allows for different control mechanisms with respect to particle size of the co-polymers as well as their overall structure in contrast to other forms of polymerization. The presence of the aqueous phase also has an effect on the physical properties of the formed latex particulates. The method of polymerization can also contribute to structural differences such as bulk density, entanglement of the polymer chains, surface charge variance, etc. Thus, the polymerization process for the formation of the latex particles is an important and distinguishing element of the present invention, as the process controls the structure formed therefrom. Further, as Donald does not teach using emulsions with an aqueous phase in forming its block copolymers, it cannot even be said that these compositions are even latex particulates *per se*, as these copolymers are not prepared as part of a latex composition.

For at least these reasons, as Donald does not teach the use of emulsion polymerization, by necessity, the structures formed in Donald are different. Thus, each and every element of claim 36 is not present in Donald. Further, as claims 37-

39, 41, and 47 depend from claim 36, it is respectfully requested that this rejection with respect to all of the claims be withdrawn.

The Examiner also rejected claims 36-39, 41, 43, and 45-47 as being anticipated by Page. Page teaches an ink including an aqueous carrier, a pigment, and a graft co-polymer dispersant. The copolymer dispersant may have blocked acid groups which are protected during the polymerization process. Similar to Donald, Page fails to teach an ink with a latex particle that is produced using aqueous emulsion polymerization of a blocked acid monomer. Thus, these particles are not latex particles, as they are never part of a latex composition. Thus, for the same reasons as described previously, emulsion polymerization is an important element of the present invention, which provides a different compositional structure than that which is formed in Page. As Page fails to teach emulsion polymerization and the resulting structural composition forming therefrom, Page fails to teach each and every element of claim 36. Therefore, as claims 37-39, 41, 43 and 45-47 depend from claim 36, it is respectfully requested that all claims rejected under this section be withdrawn.

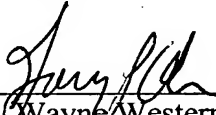
As a side note, both Donald and Page do mention the addition of latex emulsions as an ink additive, but these additives are not to be confused with the blocked acid polymers described elsewhere in the respective specifications. These are merely additives that can be included in the ink, and are not taught as being prepared using blocked acid monomers.

In view of the foregoing, Applicant believes that claims 36-39, 41, 43, and 45-47 present allowable subject matter and allowance is respectfully requested. Further, as a generic claim is in allowable condition, the Applicant respectfully requests that the claims withdrawn under the election of species requirement also be examined and allowed. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone W. Bradley Haymond (Registration No. 35,186) at (541) 715-0159 so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any
overpayment to Deposit Account No. 08-2025

Dated this 10 day of June, 2005.

Respectfully submitted,



MC Wayne Western
Attorney for Applicant
Registration No. 22,788

Gary P. Oakeson
Attorney for Applicant
Registration No. 44,266

Of:

THORPE NORTH & WESTERN, LLP
8180 South 700 East, Suite 200
Sandy, Utah 84070
(801) 566-6633

On Behalf Of:

HEWLETT-PACKARD COMPANY
1000 NE Circle Blvd., m/s 422B
Corvallis, OR 97330-4239
(541) 715-0159